

CLAIM AMENDMENTS

1. (currently amended) A method of operation for ~~an~~ a vehicle air conditioning system ~~of a motor vehicle~~ including a refrigerant compressor, ~~a driver-manipulated switch~~ an AC enable/disable device for enabling and disabling air conditioning, an evaporator for cooling inlet air when air conditioning is enabled by said AC enable/disable device, a temperature control mechanism positioned to control re-heating of air exiting the evaporator, and a driver-manipulated temperature selector for setting a desired discharge air temperature, the method comprising the steps of:

~~defining a first control schedule of temperature control mechanism position and compressor capacity for producing a discharge air temperature corresponding to a setting of said temperature selector;~~

~~defining a second control schedule of temperature control mechanism position for producing discharge air heating in relation to the setting of said temperature selector;~~

~~regulating the compressor capacity and the temperature control mechanism position in accordance with said first control schedule when air conditioning is enabled;~~
~~and~~

~~regulating the temperature control mechanism position in accordance with said second control schedule when air conditioning is disabled~~

enabling and disabling said refrigerant compressor in accordance with said AC enable/disable device, regardless of the setting of said temperature selector;

when air conditioning is enabled by said AC enable/disable device, regulating the capacity of said compressor and the position of said temperature control mechanism as a first function of the temperature selector setting for producing a discharge air temperature corresponding to said desired discharge air temperature; and

when air conditioning is disabled by said AC enable/disable device, regulating the position of said temperature control mechanism as a second function of the temperature

selector setting for producing discharge air heating in proportion said desired discharge air temperature.

2. (currently amended) The method of operation of Claim 1, wherein ~~the compressor capacity of said first control schedule is defined in terms of~~ said first function of temperature selector setting provides a desired temperature of the air exiting said evaporator, and the step of regulating the compressor capacity involves regulating the compressor capacity so that the air exiting said evaporator achieves said desired temperature.

3. (currently amended) The method of operation of Claim 1, including the steps of:

defining entry conditions for regulating the compressor capacity and the temperature control mechanism position in accordance with said ~~first control schedule~~ function of temperature selector setting; and

regulating the temperature control mechanism position in accordance with said ~~second control schedule~~ function of temperature selector setting and the compressor capacity in accordance with a nominal control setting when said entry conditions are not met.

4. (currently amended) The method of operation of Claim 3, wherein said entry conditions include detecting an ambient temperature in excess of a reference temperature; ~~activation of said driver manipulated switch for enabling air conditioning, and driver selection of an airflow mode for cooling the vehicle.~~

5. (withdrawn) A method of operation for an air conditioning system of a motor vehicle including a refrigerant compressor, a driver-manipulated switch for enabling and disabling air conditioning, an evaporator for cooling inlet air when air conditioning is

enabled, a temperature control mechanism positioned to control re-heating of air exiting the evaporator, and a driver-manipulated temperature selector, the method comprising the steps of:

defining a first control schedule of temperature control mechanism position and compressor capacity for producing a discharge air temperature corresponding to a setting of said temperature selector;

defining a second control schedule of temperature control mechanism position for producing discharge air heating in relation to the setting of said temperature selector;

regulating the temperature control mechanism position in accordance with said second control schedule and the compressor capacity in accordance with a minimum control setting to rapidly cool the vehicle when air conditioning is initially enabled; and

regulating the compressor capacity and the temperature control mechanism position in accordance with said first control schedule when said system has achieved substantially full cooling capacity.

6. (withdrawn) The method of operation of Claim 5, including the step of:

detecting that said system has achieved substantially full cooling capacity when a low side temperature or pressure of said system has been reduced below a threshold value.

7. (withdrawn) The method of operation of Claim 5, including the step of:

regulating the temperature control mechanism position in accordance with said second control schedule when air conditioning is disabled.

8. (new) The method of operation of Claim 1, including the steps of:

when air conditioning is initially enabled by said AC enable/disable device, regulating the position of said temperature control mechanism in accordance with said

second function of temperature selector setting, and the capacity of said compressor in accordance with a minimum control setting; and

when said system has achieved substantially full cooling capacity, regulating the position of said temperature control mechanism and the capacity of said compressor in accordance with said first function of temperature selector setting.

9. (new) The method of operation of Claim 8, including the step of:

detecting that said system has achieved substantially full cooling capacity when a low side temperature or pressure of said system has been reduced below a threshold value.